Petry, N.M., et al., 2004. Prize reinforcement contingency management for treating cocaine users: How low can we go, and with whom? *Addiction* 99(3):349-360.

Petry, N.M., et al., 2005a. Vouchers versus prizes: Contingency management treatment of substance abusers in community settings. *Journal of Consulting and Clinical Psychology* 73(6):1005-1014.

Petry, N.M., et al., 2005b. Effect of prize-based incentives on outcomes in stimulant abusers in outpatient psychosocial treatment programs: A National Drug Abuse Treatment Clinical Trials Network study. *Archives of General Psychiatry* 62(10):1148-1156.

Roebuck, M.C.; French, M.T.; and McLellan, A.T., 2003. DATStats: Results from 85 studies using the Drug Abuse Treatment Cost Analysis Program. *Journal of Substance Abuse Treatment* 25(1):51-57.

Sindelar, J.L., Olmstead, T.A., and Peirce, J.M., 2007. Cost-effectiveness of prize-based contingency management in methadone maintenance treatment programs. *Addiction* 102(9):1463-1471.

Yates, B.T., 1999. *Measuring and Improving Cost, Cost-Effectiveness, and Cost-Benefit for Substance Abuse Treatment Programs.* Report for the National Institute on Drug Abuse, Division of Clinical and Services Research; *www.drugabuse.gov/PDF/Costs.pdf.*

Zarkin, G.A., and Dunlap, L.J., 1999. Implications of managed care for methadone treatment: Findings from five case studies in New York State. *Journal of Substance Abuse Treatment* 17(1/2):25-36.

Zarkin, G.A.; Dunlap, L.J.; and Homsi, G., 2004. The substance abuse services cost analysis program (SASCAP): A new method for estimating drug treatment services costs. *Evaluation and Program Planning* 27(1):35-43.

Response: thoughtfulness required

Greg Brigham, Ph.D.; Ron Jackson, M.S.W.; and Janet Wood, M.B.A., M.Ed.

Janet Wood: I found the article timely. In Colorado, we are trying to institute unit costing statewide to get folks to be able to define what it is they do, pair costs and outcomes, and paint a better picture of what they're delivering. Some organizations are very skilled in this, but not all.

Greg Brigham: I enjoyed the article. I think that, in general, people don't focus enough on how to decide when to implement an evidence-based practice. I especially appreciated the authors' table of questions to ask prior to adopting an intervention. They are good questions, and they exemplify the sort of thoughtfulness that's required to make good decisions.

Ron Jackson: They're the meat of the article.

Interventions small and large

Brigham: The authors' choice of contingency management (CM) as a main example to illustrate cost concepts is a good one, in the sense that its elements are relatively tangible and easily counted, almost like a medication. You can just tally up the costs of the gifts and the costs of administering the program, and that's basically what the intervention is going to cost.

Jackson: Another advantage of CM is that it's relatively easy to monitor fidelity. Did you follow the reinforcement schedule or not? Did people get their reinforcers in a timely fashion? Yes or no?

Brigham: Cost assessment can be considerably more challenging, however, for some other evidence-based practices. For example, motivational interviewing (MI), which is very popular, requires more training and supervision than CM. Fidelity evaluation for MI is more complex than simply counting the number of gifts being given out. Cognitive-behavioral therapy is another intervention that's more complex than CM; it takes more training and supervision and may require special staff.

Jackson: That's right. Suppose you want to implement MI and integrate it routinely into your treatment program. You'll use the basic principles described in the article to make your cost estimate, but it'll be difficult to estimate how much training it's going to take and how much additional supervision is needed to monitor and maintain fidelity.

Wood: CM is also simple to cost out compared with many other practices, because you usually add it to your treatment as usual instead of using it to replace something else you do. For the same reason, the cost-benefit question—how much improvement am I getting for my investment?—is often easier to answer with CM.

Brigham: Yes, programs will find it difficult to separate out the impact of some of the bigger, more involved evidence-based interventions from the effects of all of the associated inputs and changes. For those interventions, in general, I think programs have to rely on the research findings for estimates of effect sizes to use in their cost-benefit calculations.

Jackson: Research has fallen short, however, in articulating what kind of bang for the buck community programs can expect and how to measure against some benchmark. For example, what percentage of increase in positive patient outcomes can a program expect to get from adopting CM versus the cost of its treatment as usual? If I'm going to get a 10 percent bump in outcomes, but it's going to cost me 25 percent more, I may not be as interested.

Brigham: Finding useful research can be a

challenge. Ideally, what a program wants are estimates from studies done with treatment-seeking people and community settings and providers as close as possible to its own. Unfortunately, many practices have been validated mainly in efficacy studies that were conducted in special settings with specialized counselors, narrow inclusion criteria, and specific control conditions, which may or may not resemble real care in the community. Nevertheless, even though the estimates from efficacy studies may not be ideal, they may provide some sense of what to expect in the way of results, if applied thoughtfully.

Wood: The article's references include a number of studies and resources that can help programs with cost and cost-benefit calculations. If you aren't already doing cost accounting, you don't have to start from the beginning. You can go to one of these, put in the specifics for your organization, and get the estimates you need.

A new intervention or a new receptionist?

Brigham: The concept of opportunity cost is important. If resources are limited, as they often are in substance abuse treatment settings, using a resource for one thing means sacrificing the opportunity to do something else.

There is a push now for people to adopt evidence-based practices, and I am a big supporter of this. I think it's a really good idea for providers to look at these practices. However, programs may have other needs that are higher priorities for spending their resources. These would include, for example, having clean and safe facilities and making sure that all staff, starting with the receptionist who answers the phone, treat people with dignity and respect. One could argue that having sufficient staff and adequate hours of operation to offer treatment on demand trumps the value of any intervention—since failing to offer treatment in a timely fashion can undo what you're trying to do, and offering it quickly can really improve engagement and outcomes. If a program has a long waiting list, its lobby is not clean, and there aren't enough friendly staff to greet people at the door, then adopting an evidence-based practice would be like putting an expensive GPS system into a car with bald tires.

Jackson: Don't forget about the care and feeding of the treatment staff themselves.

Brigham: Good point. For any intervention to work well, your program needs to have adequate salaries, benefits, and training and an environment that keeps people at your center, so that you aren't having constant staff turnover.

Wood: Your basic elements of leadership, staff makeup, and the strength of your business are prerequisites for putting you into a position to adopt evidence-based practices. The culture of your organization is also critical so that there is administrative support and an environment of acceptance of new ideas. I always recommend that providers who are just starting to explore evidence-based practices begin with the Network for the Improvement of Addiction Treatment *(www.niatx.net/Home/Home.aspx)* to help them get used to the changes.

Jackson: One thing we haven't talked about is the degree to which community treatment programs routinely monitor their own outcomes. Those who don't may not even have a baseline to compare the effect of the adoption of an evidence-based practice.

Wood: True. That's step one.

Jackson: One source of the pressure on community programs to adopt evidence-based practices is external mandates. A county contractor, a State director, a State overseer will say, "We want you to do more evidence-based practice." But you've only got a finite amount of money. They don't tell you what you're supposed to do less of.

Wood: Well, now, I'm a State director, so hold on here.

Jackson: I know, Janet. But that's the real world, and you know that's true.

Wood: In Colorado we allow programs a lot of flexibility in what evidence-based practices they adopt. There is a wide continuum of interventions, with some that are easier and less costly to implement and others that require more resources and effort. At one end there is CM, and at the other are family therapies, such as multisystemic therapy, where you need master's level therapists and 2 weeks of intensive training often delivered out of State by the developers. In addition, our State uses services from the Addiction Technology Transfer Center (ATTC), provides some funds for training costs, and facilitates other cost-saving activities. For example, we sponsor semiannual research forums that attract about 300 people for raising awareness of evidence-based practices, and then we pair those events with actual skill-building training for a smaller number of people.

That said, we are now considering whether we might want to choose one or two practices to focus on, make sure they're disseminated widely, and build from there. The issue is the extent to which the cost of offering training for many different interventions diffuses our resources. We are constantly in touch with our ATTC , and we've got a pretty active group of people in recovery and other stakeholders who work together to help us make these decisions.

Costs to patients

Wood: The cost to patients is a real issue in Colorado. Our providers are not reimbursed for nearly the full cost of care, and the patients make up the difference in fees. The patients are bearing a high cost now, and new evidence-based interventions may push it even higher—for example, if the intervention requires more intensive visits or supplemental medications.

Brigham: I'm glad the authors included this concept in their paper. To me, the question for patients is similar to what the question should be for providers: What value do I get back for this investment?

In my experience, patients who are serious about dealing with their problems don't mind incurring a lot of personal cost, even if they have to come to the clinic several times a week for several hours. What they don't like to do, and shouldn't have to do, is participate in things that don't provide any value to them. That would include making extra visits just to get assessed without getting treatment or having to travel to multiple locations. Some substance abuse treatments have a very high cost in time, inconvenience, and invasiveness, even aside from the fees.

Jackson: I completely agree. Treatment Center X, why are you charging me $10 more a session now? What am I getting for that additional $10? Medicaid, legislatures, and funders ask the same questions, and you have to find plausible answers if you expect to get reimbursed.